

## FIG. 1

(SEQ ID NO: 1)

```

gcgccgcgctc ccgcaggccg tgatgccgcc cgcgcgaggagg tggcccggac cgcaagtgtccc 60
caagagagct ctaatggtac caagtgtacag gttggcttta ctgtgactcg gggacgccag 120
agctcctgag aag atg tca gca ata cag gcc gcc tgg cca tcc ggt aca      169
      Met Ser Ala Ile Gln Ala Ala Trp Pro Ser Gly Thr
          1             5             10

gaa tgt att gcc aag tac aac ttc cac ggc act gcc gag cag gac ctg      217
Glu Cys Ile Ala Lys Tyr Asn Phe His Gly Thr Ala Glu Gln Asp Leu
          15             20             25

ccc ttc tgc aaa gga gac gtg ctc acc att gtg gcc gtc acc aag gac      265
Pro Phe Cys Lys Gly Asp Val Leu Thr Ile Val Ala Val Thr Lys Asp
          30             35             40

ccc aac tgg tac aaa gcc aaa aac aag gtg ggc cgt gag ggc atc atc      313
Pro Asn Trp Tyr Lys Ala Lys Asn Lys Val Gly Arg Glu Gly Ile Ile
          45             50             55

cca gcc aac tac gtc cag aag cgg gag ggc gtg aag gcg ggt acc aaa      361
Pro Ala Asn Tyr Val Gln Lys Arg Glu Gly Val Lys Ala Gly Thr Lys
          65             70             75

ctc agc ctc atg cct tgg ttc cac ggc aag atc aca cgg gag cag gct      409
Leu Ser Leu Met Pro Trp Phe His Gly Lys Ile Thr Arg Glu Gln Ala
          80             85             90

gag cgg ctt ctg tac ccg ccg gag aca ggc ctg ttc ctg gtg cgg gag      457
Glu Arg Leu Leu Tyr Pro Pro Glu Thr Gly Leu Phe Leu Val Arg Glu
          95             100             105

agc acc aac tac ccc gga gac tac acg ctg tgc gtg agc tgc gac ggc      505
Ser Thr Asn Tyr Pro Gly Asp Tyr Thr Leu Cys Val Ser Cys Asp Gly
          110             115             120

aag gtg gag cac tac cgc atc atg tac cat gcc agc aag ctc agc atc      553
Lys Val Glu His Tyr Arg Ile Met Tyr His Ala Ser Lys Leu Ser Ile
          125             130             135             140

gac gag gag gtg tac ttt gag aac ctc atg cag ctg gtg gag cac tac      601
Asp Glu Glu Val Tyr Phe Glu Asn Leu Met Gln Leu Val Glu His Tyr
          145             150             155

acc tca gac gca gat gga ctc tgt acg cgc ctc att aaa cca aag gtc      649
Thr Ser Asp Ala Asp Gly Leu Cys Thr Arg Leu Ile Lys Pro Lys Val
          160             165             170

atg gag ggc aca gtg gcg gcc cag gat gag ttc tac cgc agc ggc tgg      697
Met Glu Gly Thr Val Ala Ala Gln Asp Glu Phe Tyr Arg Ser Gly Trp
          175             180             185

gcc ctg aac atg aag gag ctg aag ctg ctg cag acc atc ggg aag ggg      745
Ala Leu Asn Met Lys Glu Leu Lys Leu Leu Gln Thr Ile Gly Lys Gly
          190             195             200

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## FIG. 1 cont.

gag ttc gga gac gtg atg ctg ggc gat tac cga ggg aac aaa gtc gcc	793
Glu Phe Gly Asp Val Met Leu Gly Asp Tyr Arg Gly Asn Lys Val Ala	
205 210 215 220	
gtc aag tgc att aag aac gac gcc act gcc cag gcc ttc ctg gct gaa	841
Val Lys Cys Ile Lys Asn Asp Ala Thr Ala Gln Ala Phe Leu Ala Glu	
225 230 235	
gcc tca gtc atg acg caa ctg cgg cat agc aac ctg gtg cag ctc ctg	889
Ala Ser Val Met Thr Gln Leu Arg His Ser Asn Leu Val Gln Leu Leu	
240 245 250	
ggc gtg atc gtg gag gag aag ggc ggg ctc tac atc gtc act gag tac	937
Gly Val Ile Val Glu Glu Lys Gly Gly Leu Tyr Ile Val Thr Glu Tyr	
255 260 265	
atg gcc aag ggg agc ctt gtg gac tac ctg cgg tct agg ggt cgg tca	985
Met Ala Lys Gly Ser Leu Val Asp Tyr Leu Arg Ser Arg Gly Arg Ser	
270 275 280	
gtg ctg ggc gga gac tgt ctc ctc aag ttc tcg cta gat gtc tgc gag	1033
Val Leu Gly Gly Asp Cys Leu Leu Lys Phe Ser Leu Asp Val Cys Glu	
285 290 295 300	
gcc atg gaa tac ctg gag ggc aac aat ttc gtg cat cga gac ctg gct	1081
Ala Met Glu Tyr Leu Glu Gly Asn Asn Phe Val His Arg Asp Leu Ala	
305 310 315	
gcc cgc aat gtg ctg gtg tct gag gac aac gtg gcc aag gtc agc gac	1129
Ala Arg Asn Val Leu Val Ser Glu Asp Asn Val Ala Lys Val Ser Asp	
320 325 330	
ttt ggt ctc acc aag gag gcg tcc agc acc cag gac acg ggc aag ctg	1177
Phe Gly Leu Thr Lys Glu Ala Ser Ser Thr Gln Asp Thr Gly Lys Leu	
335 340 345	
cca gtc aag tgg aca gcc cct gag gcc ctg aga gag aag aaa ttc tcc	1225
Pro Val Lys Trp Thr Ala Pro Glu Ala Leu Arg Glu Lys Lys Phe Ser	
350 355 360	
act aag tct gac gtg tgg agt ttc gga atc ctt ctc tgg gaa atc tac	1273
Thr Lys Ser Asp Val Trp Ser Phe Gly Ile Leu Leu Trp Glu Ile Tyr	
365 370 375 380	
tcc ttt ggg cga gtg cct tat cca aga att ccc ctg aag gac gtc gtc	1321
Ser Phe Gly Arg Val Pro Tyr Pro Arg Ile Pro Leu Lys Asp Val Val	
385 390 395	
cct cgg gtg gag aag ggc tac aag atg gat gcc ccc gac ggc tgc ccg	1369
Pro Arg Val Glu Lys Gly Tyr Lys Met Asp Ala Pro Asp Gly Cys Pro	
400 405 410	
ccc gca gtc tat gaa gtc atg aag aac tgc tgg cac ctg gac gcc gcc	1417
Pro Ala Val Tyr Glu Val Met Lys Asn Cys Trp His Leu Asp Ala Ala	
415 420 425	

**FIG. 1 cont.**

```
atg cgg ccc tcc ttc cta cag ctc cga gag cag ctt gag cac atc aaa 1465
Met Arg Pro Ser Phe Leu Gln Leu Arg Glu Gln Leu Glu His Ile Lys
    430                435                440

acc cac gag ctg cac ctg tgacggctgg cctccgcctg ggtcatgggc 1513
Thr His Glu Leu His Leu
445                450

ctgtggggac tgaacctgga agatcatgga cctggtgccc ctgctcactg ggcccagagcc 1573
tgaactgagc cccagcgggc tggcgggcct ttttcctgcg tcccagcctg caccctccg 1633
gccccgtctc tcttggaacc acctgtgggg cctggggagc ccaactgaggg gccagggagg 1693
aaggaggcca cggagcggga ggcagcggcc caccacgtcg ggcttccctg gcctcccgcc 1753
actcgccttc ttagagtttt attcctttcc ttttttgaga ttttttttcc gtgtgtttat 1813
tttttattat ttttcaagat aaggagaaaag aaagtaccca gcāaatgggc attttacaag 1873
aagtacgaat cttatttttc ctgtcctgcc cgtgaggggtg ggggggaccg ggcccctctc 1933
tagggacccc tcgcccagc ctcatcctcc attctgtgtc ccatgtcccg tgtctcctcg 1993
gtcgccccgt gtttgcgctt gaccatgttg cactgtttgc atgcgcccga ggcagacgtc 2053
tgtcaggggc ttggatttcg tgtgccgctg ccaccgcgcc acccgcttg tgagatggaa 2113
ttgtaataaa ccacgccatg aggacaccgc cgccgcctc ggcgcttcct ccaccgaaaa 2173
aaaaaaaaaa aaaa 2187
```

## FIG. 2

(SEQ ID NO: 2)

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Met Ser Ala Ile Gln Ala Ala Trp Pro Ser Gly Thr Glu Cys Ile Ala
 1          5          10          15
Lys Tyr Asn Phe His Gly Thr Ala Glu Gln Asp Leu Pro Phe Cys Lys
          20          25          30
Gly Asp Val Leu Thr Ile Val Ala Val Thr Lys Asp Pro Asn Trp Tyr
          35          40          45
Lys Ala Lys Asn Lys Val Gly Arg Glu Gly Ile Ile Pro Ala Asn Tyr
          50          55          60
Val Gln Lys Arg Glu Gly Val Lys Ala Gly Thr Lys Leu Ser Leu Met
          65          70          75          80
Pro Trp Phe His Gly Lys Ile Thr Arg Glu Gln Ala Glu Arg Leu Leu
          85          90          95
Tyr Pro Pro Glu Thr Gly Leu Phe Leu Val Arg Glu Ser Thr Asn Tyr
          100          105          110
Pro Gly Asp Tyr Thr Leu Cys Val Ser Cys Asp Gly Lys Val Glu His
          115          120          125
Tyr Arg Ile Met Tyr His Ala Ser Lys Leu Ser Ile Asp Glu Glu Val
          130          135          140
Tyr Phe Glu Asn Leu Met Gln Leu Val Glu His Tyr Thr Ser Asp Ala
          145          150          155          160
Asp Gly Leu Cys Thr Arg Leu Ile Lys Pro Lys Val Met Glu Gly Thr
          165          170          175
Val Ala Ala Gln Asp Glu Phe Tyr Arg Ser Gly Trp Ala Leu Asn Met
          180          185          190
Lys Glu Leu Lys Leu Leu Gln Thr Ile Gly Lys Gly Glu Phe Gly Asp
          195          200          205
Val Met Leu Gly Asp Tyr Arg Gly Asn Lys Val Ala Val Lys Cys Ile
          210          215          220
Lys Asn Asp Ala Thr Ala Gln Ala Phe Leu Ala Glu Ala Ser Val Met
          225          230          235          240
Thr Gln Leu Arg His Ser Asn Leu Val Gln Leu Leu Gly Val Ile Val
          245          250          255
Glu Glu Lys Gly Gly Leu Tyr Ile Val Thr Glu Tyr Met Ala Lys Gly
          260          265          270
Ser Leu Val Asp Tyr Leu Arg Ser Arg Gly Arg Ser Val Leu Gly Gly
          275          280          285
Asp Cys Leu Leu Lys Phe Ser Leu Asp Val Cys Glu Ala Met Glu Tyr
          290          295          300
Leu Glu Gly Asn Asn Phe Val His Arg Asp Leu Ala Ala Arg Asn Val
          305          310          315          320
Leu Val Ser Glu Asp Asn Val Ala Lys Val Ser Asp Phe Gly Leu Thr
          325          330          335
Lys Glu Ala Ser Ser Thr Gln Asp Thr Gly Lys Leu Pro Val Lys Trp
          340          345          350
Thr Ala Pro Glu Ala Leu Arg Glu Lys Lys Phe Ser Thr Lys Ser Asp
          355          360          365
Val Trp Ser Phe Gly Ile Leu Leu Trp Glu Ile Tyr Ser Phe Gly Arg
          370          375          380
Val Pro Tyr Pro Arg Ile Pro Leu Lys Asp Val Val Pro Arg Val Glu
          385          390          395          400
Lys Gly Tyr Lys Met Asp Ala Pro Asp Gly Cys Pro Pro Ala Val Tyr
          405          410          415
Glu Val Met Lys Asn Cys Trp His Leu Asp Ala Ala Met Arg Pro Ser
          420          425          430
Phe Leu Gln Leu Arg Glu Gln Leu Glu His Ile Lys Thr His Glu Leu
          435          440          445
His Leu
          450

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**FIG. 3**

(SEQ ID NO: 3)

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gcgagagccaa ggcacacggg tctgaccctt gggccggccc ggagcaagtg acacggaccg 60
gtcgcctatc ctgaccacag caaagcggcc cggagcccgc ggaggggacc tgacgggggc 120
gtaggcgccg gaaggctggg ggccccggag ccgggcccgc gtggcccagag ttccggtgag 180
cggacggcgg cgcgcgacaga tttgata atg ggc tgc att aaa agt aaa gaa aac 234
Met Gly Cys Ile Lys Ser Lys Glu Asn
1 5
aaa agt cca gcc att aaa tac aga cct gaa aat act cca gag cct gtc 282
Lys Ser Pro Ala Ile Lys Tyr Arg Pro Glu Asn Thr Pro Glu Pro Val
10 15 20 25
agt aca agt gtg agc cat tat gga gca gaa ccc act aca gtg tca cca 330
Ser Thr Ser Val Ser His Tyr Gly Ala Glu Pro Thr Thr Val Ser Pro
30 35 40
tgt ccg tca tct tca gca aag gga aca gca gtt aat ttc agc agt ctt 378
Cys Pro Ser Ser Ser Ala Lys Gly Thr Ala Val Asn Phe Ser Ser Leu
45 50 55
tcc atg aca cca ttt gga gga tcc tca ggg gta acg cct ttt gga ggt 426
Ser Met Thr Pro Phe Gly Gly Ser Ser Gly Val Thr Pro Phe Gly Gly
60 65 70
gca tct tcc tca ttt tca gtg gtg cca agt tca tat cct gct ggt tta 474
Ala Ser Ser Ser Phe Ser Val Val Pro Ser Ser Tyr Pro Ala Gly Leu
75 80 85
aca ggt ggt gtt act ata ttt gtg gcc tta tat gat tat gaa gct aga 522
Thr Gly Gly Val Thr Ile Phe Val Ala Leu Tyr Asp Tyr Glu Ala Arg
90 95 100 105
act aca gaa gac ctt tca ttt aag aag ggt gaa aga ttt caa ata att 570
Thr Thr Glu Asp Leu Ser Phe Lys Lys Gly Glu Arg Phe Gln Ile Ile
110 115 120
aac aat acg gaa gga gat tgg tgg gaa gca aga tca atc gct aca gga 618
Asn Asn Thr Glu Gly Asp Trp Trp Glu Ala Arg Ser Ile Ala Thr Gly
125 130 135
aag aat ggt tat atc ccg agc aat tat gta gcg cct gca gat tcc att 666
Lys Asn Gly Tyr Ile Pro Ser Asn Tyr Val Ala Pro Ala Asp Ser Ile
140 145 150
cag gca gaa gaa tgg tat ttt ggc aaa atg ggg aga aaa gat gct gaa 714
Gln Ala Glu Glu Trp Tyr Phe Gly Lys Met Gly Arg Lys Asp Ala Glu
155 160 165
aga tta ctt ttg aat cct gga aat caa cga ggt att ttc tta gta aga 762
Arg Leu Leu Leu Asn Pro Gly Asn Gln Arg Gly Ile Phe Leu Val Arg
170 175 180 185
gag agt gaa aca act aaa ggt gct tat tcc ctt tct att cgt gat tgg 810
Glu Ser Glu Thr Thr Lys Gly Ala Tyr Ser Leu Ser Ile Arg Asp Trp
190 195 200

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## FIG. 3 cont.

gat gag ata agg ggt gac aat gtg aaa cac tac aaa att agg aaa ctt	858
Asp Glu Ile Arg Gly Asp Asn Val Lys His Tyr Lys Ile Arg Lys Leu	
205 210 215	
gac aat ggt gga tac tat atc aca acc aga gca caa ttt gat act ctg	906
Asp Asn Gly Gly Tyr Tyr Ile Thr Thr Arg Ala Gln Phe Asp Thr Leu	
220 225 230	
cag aaa ttg gtg aaa cac tac aca gaa cat gct gat ggt tta tgc cac	954
Gln Lys Leu Val Lys His Tyr Thr Glu His Ala Asp Gly Leu Cys His	
235 240 245	
aag ttg aca act gtg tgt cca act gtg aaa cct cag act caa ggt cta	1002
Lys Leu Thr Thr Val Cys Pro Thr Val Lys Pro Gln Thr Gln Gly Leu	
250 255 260 265	
gca aaa gat gct tgg gaa atc cct cga gaa tct ttg cga cta gag gtt	1050
Ala Lys Asp Ala Trp Glu Ile Pro Arg Glu Ser Leu Arg Leu Glu Val	
270 275 280	
aaa cta gga caa gga tgt ttc ggc gaa gtg tgg atg gga aca tgg aat	1098
Lys Leu Gly Gln Gly Cys Phe Gly Glu Val Trp Met Gly Thr Trp Asn	
285 290 295	
gga acc acg aaa gta gca atc aaa aca cta aaa cca ggt aca atg atg	1146
Gly Thr Thr Lys Val Ala Ile Lys Thr Leu Lys Pro Gly Thr Met Met	
300 305 310	
cca gaa gct ttc ctt caa gaa gct cag ata atg aaa aaa tta aga cat	1194
Pro Glu Ala Phe Leu Gln Glu Ala Gln Ile Met Lys Lys Leu Arg His	
315 320 325	
gat aaa ctt gtt cca cta tat gct gtt gtt tct gaa gaa cca att tac	1242
Asp Lys Leu Val Pro Leu Tyr Ala Val Val Ser Glu Glu Pro Ile Tyr	
330 335 340 345	
att gtc act gaa ttt atg tca aaa gga agc tta tta gat ttc ctt aag	1290
Ile Val Thr Glu Phe Met Ser Lys Gly Ser Leu Leu Asp Phe Leu Lys	
350 355 360	
gaa gga gat gga aag tat ttg aag ctt cca cag ctg gtt gat atg gct	1338
Glu Gly Asp Gly Lys Tyr Leu Lys Leu Pro Gln Leu Val Asp Met Ala	
365 370 375	
gct cag att gct gat ggt atg gca tat att gaa aga atg aac tat att	1386
Ala Gln Ile Ala Asp Gly Met Ala Tyr Ile Glu Arg Met Asn Tyr Ile	
380 385 390	
cac cga gat ctt cgg gct gct aat att ctt gta gga gaa aat ctt gtg	1434
His Arg Asp Leu Arg Ala Ala Asn Ile Leu Val Gly Glu Asn Leu Val	
395 400 405	
tgc aaa ata gca gac ttt ggt tta gca agg tta att gaa gac aat gaa	1482
Cys Lys Ile Ala Asp Phe Gly Leu Ala Arg Leu Ile Glu Asp Asn Glu	
410 415 420 425	
tac aca gca aga caa ggt gca aaa ttt cca atc aaa tgg aca gct cct	1530
Tyr Thr Ala Arg Gln Gly Ala Lys Phe Pro Ile Lys Trp Thr Ala Pro	
430 435 440	

## FIG. 3 cont.

gaa gct gca ctg tat ggt cgg ttt aca ata aag tct gat gtc tgg tca 1578  
 Glu Ala Ala Leu Tyr Gly Arg Phe Thr Ile Lys Ser Asp Val Trp Ser  
 445 450 455

ttt gga att ctg caa aca gaa cta gta aca aag ggc cga gtg cca tat 1626  
 Phe Gly Ile Leu Gln Thr Glu Leu Val Thr Lys Gly Arg Val Pro Tyr  
 460 465 470

cca ggt atg gtg aac cgt gaa gta cta gaa caa gtg gag cga gga tac 1674  
 Pro Gly Met Val Asn Arg Glu Val Leu Glu Gln Val Glu Arg Gly Tyr  
 475 480 485

agg atg ccg tgc cct cag ggc tgt cca gaa tcc ctc cat gaa ttg atg 1722  
 Arg Met Pro Cys Pro Gln Gly Cys Pro Glu Ser Leu His Glu Leu Met  
 490 495 500 505

aat ctg tgt tgg aag aag gac cct gat gaa aga cca aca ttt gaa tat 1770  
 Asn Leu Cys Trp Lys Lys Asp Pro Asp Glu Arg Pro Thr Phe Glu Tyr  
 510 515 520

att cag tcc ttc ttg gaa gac tac ttc act gct aca gag cca cag tac 1818  
 Ile Gln Ser Phe Leu Glu Asp Tyr Phe Thr Ala Thr Glu Pro Gln Tyr  
 525 530 535

cag cca gga gaa aat tta taattcaagt agcctat tttt atatgcacaa 1866  
 Gln Pro Gly Glu Asn Leu  
 540

atctgccaaa atataaagaa cttgtgtaga ttttctacag gaatcaaaag aagaaaatct 1926  
 tctttactct gcatgttttt aatggtaaac tggaatccca gatatgggtg cacaaaacca 1986  
 cttttttttc cccaagtatt aaactctaata gtaccaatga tgaatttatc agcgtat ttc 2046  
 aggggtccaaa caaaatagag ctaagatact gatgacagtg tgggtgacag catggtaatg 2106  
 aaggacagtg aggcctcctgc ttatttataa atcatttcct ttcttttttt ccccaaagtc 2166  
 agaattgctc aaagaaaatt atttattggt acagataaaa cttgagagat aaaaagctat 2226  
 accataataa aatctaaaat taaggaatat catgggacca aataattcca ttccagtttt 2286  
 ttaaagt ttc ttgcatttat tattctcaaa agttttttct aagttaaaca gtcagtatgc 2346  
 aatcttaata tatgctttct tttgcatgga catgggccag gtttttcaaa aggaatataa 2406  
 acaggatctc aaacttgatt aaatgttaga ccacagaagt ggaatttgaa agtataatgc 2466  
 agtacattaa tattcatggt catggaactg aaagaataag aactttttca cttcagtcct 2526  
 tttctgaaga gtttgactta gaataatgaa ggtaactaga aagtgagtta atcttgtatg 2586  
 aggttgcatg gatttttttaa ggcaatatat aattgaaact actgtccaat caaaggggaa 2646  
 atgttttgat ctttagatag catgcaaagt aagaccagc attttaaaag ccctttttta 2706  
 aaaactagac ttcgtactgt gagtattgct tatatgtcct tatggggatg ggtgccacaa 2766  
 atagaaaata tgaccagatc agggacttga atgcactttt gctcatggtg aatatagatg 2826

**FIG. 3 cont.**

aacagagagg aaaatgtatt taaaagaaat acgagaaaag aaaatgtgaa agttttacaa 2886  
gtagagggga tggaaggtaa tgtttaatgt tgatgtcatg gagtgacaga atggctttgc 2946  
tggcactcag agctcctcac ttagctatat tctgagactt tgaagagtta taaagtataa 3006  
ctataaaact aattttttctt acacactaaa tgggtatttg ttcaaaataa tgaagttatg 3066  
gcttcacatt cattgcagtg ggatatgggt tttatgtaaa acatttttag aactccagtt 3126  
ttcaaatacat gtttgaatct acattcactt ttttttgttt tcttttttga gacggagtct 3186  
cgctctgccg cccaggtcgg agtgcagtgg cgcgatctcg gctcactgca agctctgcct 3246  
cccaggttca caccattctc ctgcctcagc ctcccagata gctgggacta cagggtgcca 3306  
ccaccacgcc tggctagttt tttgtatttt tagtagagac gcagtttcac cgtgttagcc 3366  
aggatgggtct cgatctcctg accttgatgat ctgcccgcct cggcctccca aagtgtctggg 3426  
attacaggtg tgagccaccg cgcccagcct acattcactt ctaaagtcta tgtaatggtg 3486  
gtcatttttt ccctttttaga atacattaaa tgggtgattt ggggaggaaa acttattctg 3546  
aatattaacg gtggtgaaaa ggggacagtt tttaccctaa agtgcaaaag tgaacatac 3606  
aaaataagac taatttttaa gagtaactca gtaatttcaa aatacagatt tgaatagcag 3666  
cattagtggg ttgagtgtct agcaaaggaa aaattgatga ataaaatgaa ggtctgggtg 3726  
atatgtttta aaatactctc atatagtcac actttaaatt aagccttata ttagggccct 3786  
ctattttcag gatataattc ttaactatca ttatttacct gattttaatc atcagattcg 3846  
aaattctgtg ccatggcgta tatgttcaaa ttcaaaccat ttttaaaatg tgaagatgga 3906  
cttcattgcaa gttggcagtg gttctggtac taaaaattgt ggttgttttt tctgtttacg 3966  
taacctgctt agtattgaca ctctctacca agagggtctt cctaagaaga gtgctgtcat 4026  
tatttcctct tatcaacaac ttgtgacatg agatttttta agggctttat gtgaactatg 4086  
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ctaatacagga aagtaaggca ggaaaagttg atggatttca ttaggtttta actgaatgga 4206  
gcagttcctt atataataac aattgtatag tagggataaa acactaaca tgtgtattca 4266  
ttttaaattg ttctgtattt ttaaattgcc aagaaaaaca actttgtaaa tttggagata 4326  
ttttccaaca gcttttcgtc ttcagtgtct taatgtggaa gttaaccctt accaaaaaag 4386  
gaagtggca aaaacagcct tctagcacac ttttttaaata gaataatggg agcctaaact 4446  
taatattttt ataaagtatt gtaatatgtt tttgtggata attgaaataa aaagttctca 4506  
ttgaatgcac c 4517



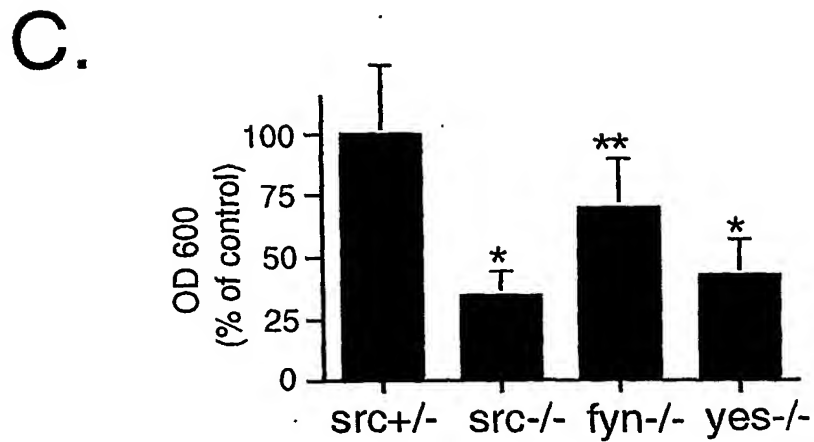
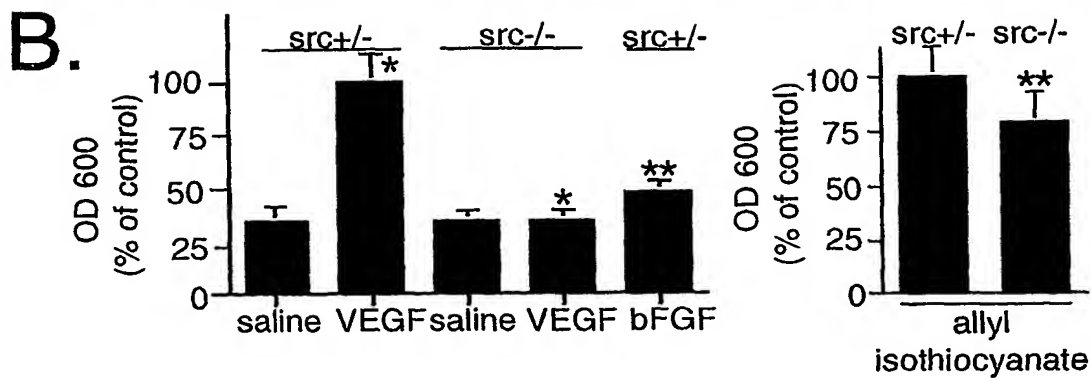
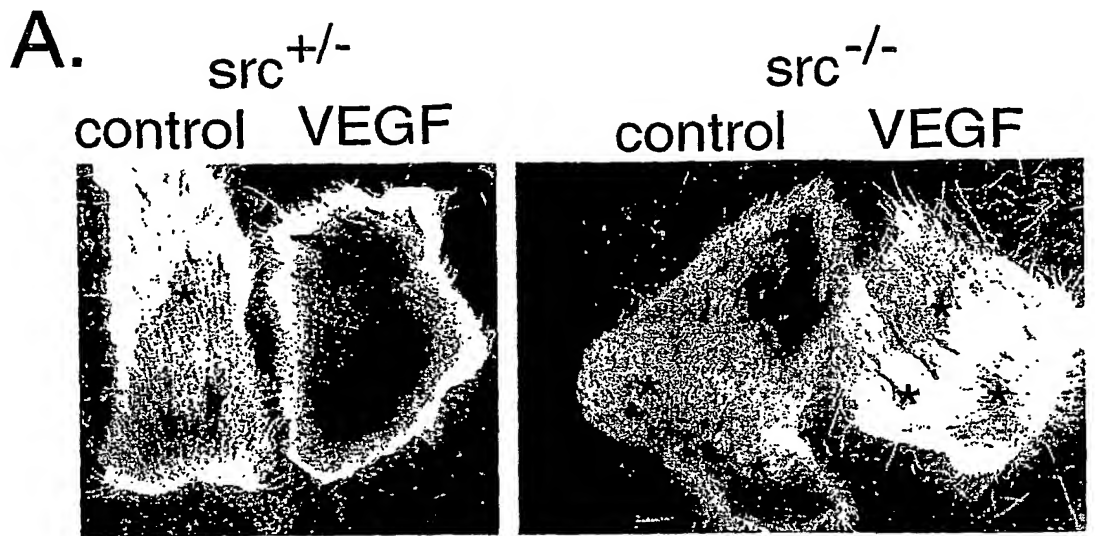
## FIG. 4

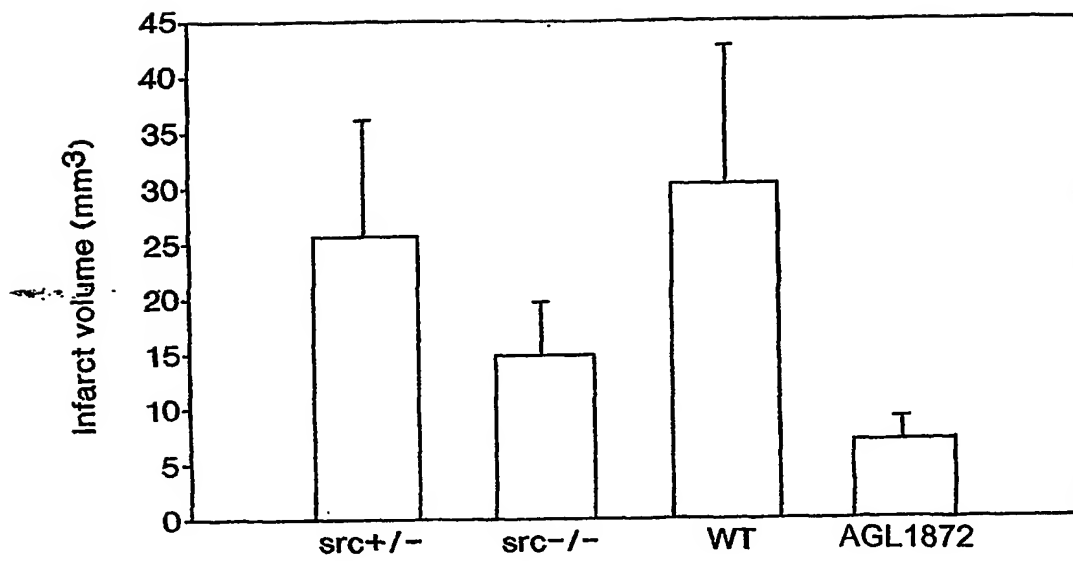
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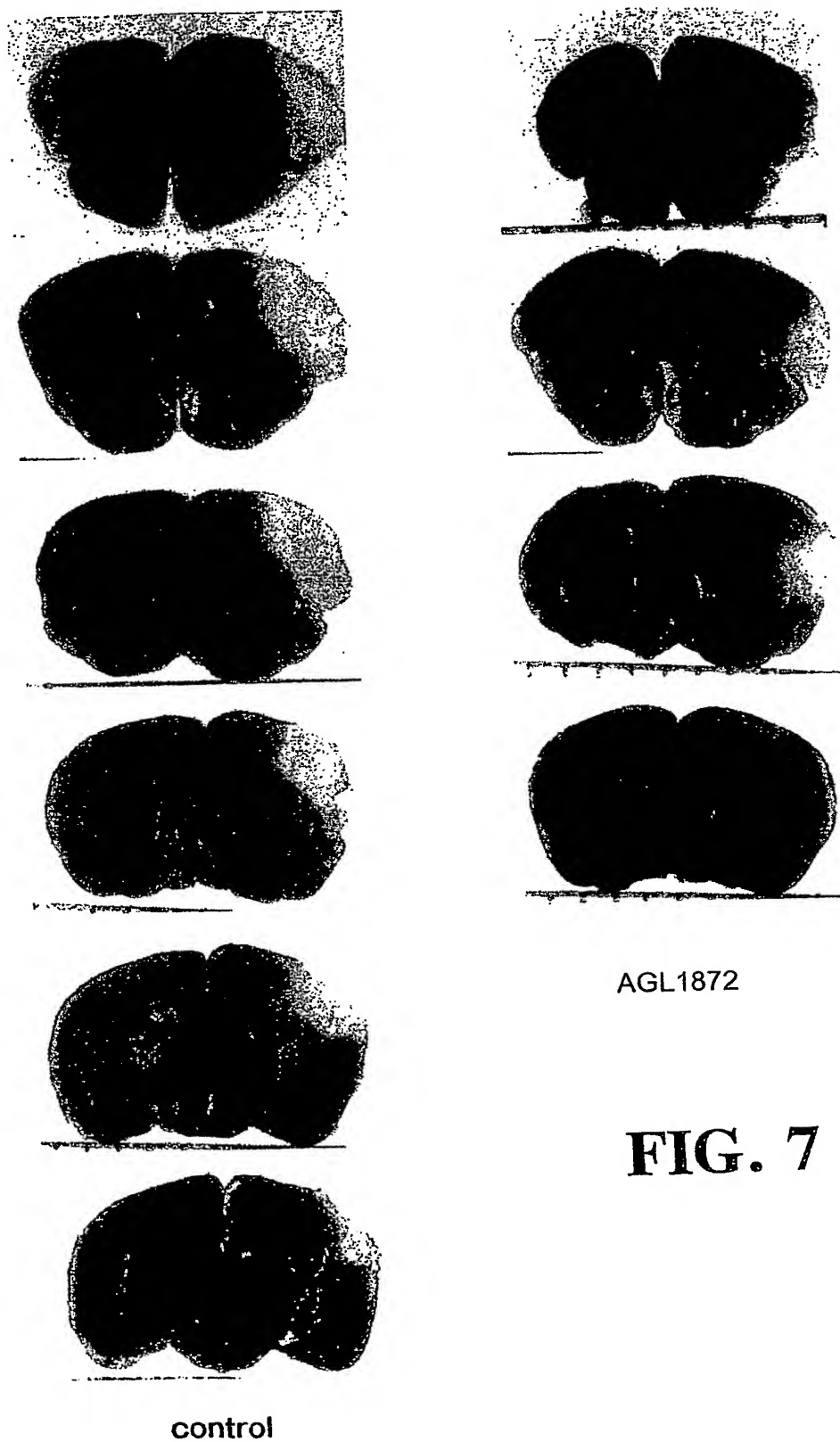
Met	Gly	Cys	Ile	Lys	Ser	Lys	Glu	Asn	Lys	Ser	Pro	Ala	Ile	Lys	Tyr
1				5					10					15	
Arg	Pro	Glu	Asn	Thr	Pro	Glu	Pro	Val	Ser	Thr	Ser	Val	Ser	His	Tyr
			20					25					30		
Gly	Ala	Glu	Pro	Thr	Thr	Val	Ser	Pro	Cys	Pro	Ser	Ser	Ser	Ala	Lys
		35					40					45			
Gly	Thr	Ala	Val	Asn	Phe	Ser	Ser	Leu	Ser	Met	Thr	Pro	Phe	Gly	Gly
	50				55					60					
Ser	Ser	Gly	Val	Thr	Pro	Phe	Gly	Gly	Ala	Ser	Ser	Ser	Phe	Ser	Val
	65				70					75					80
Val	Pro	Ser	Ser	Tyr	Pro	Ala	Gly	Leu	Thr	Gly	Gly	Val	Thr	Ile	Phe
			85						90					95	
Val	Ala	Leu	Tyr	Asp	Tyr	Glu	Ala	Arg	Thr	Thr	Glu	Asp	Leu	Ser	Phe
			100					105					110		
Lys	Lys	Gly	Glu	Arg	Phe	Gln	Ile	Asn	Asn	Thr	Glu	Gly	Asp	Trp	
		115				120					125				
Trp	Glu	Ala	Arg	Ser	Ile	Ala	Thr	Gly	Lys	Asn	Gly	Tyr	Ile	Pro	Ser
	130					135					140				
Asn	Tyr	Val	Ala	Pro	Ala	Asp	Ser	Ile	Gln	Ala	Glu	Glu	Trp	Tyr	Phe
	145				150					155					160
Gly	Lys	Met	Gly	Arg	Lys	Asp	Ala	Glu	Arg	Leu	Leu	Leu	Asn	Pro	Gly
			165					170					175		
Asn	Gln	Arg	Gly	Ile	Phe	Leu	Val	Arg	Glu	Ser	Glu	Thr	Thr	Lys	Gly
			180					185					190		
Ala	Tyr	Ser	Leu	Ser	Ile	Arg	Asp	Trp	Asp	Glu	Ile	Arg	Gly	Asp	Asn
		195					200						205		
Val	Lys	His	Tyr	Lys	Ile	Arg	Lys	Leu	Asp	Asn	Gly	Gly	Tyr	Tyr	Ile
	210					215					220				
Thr	Thr	Arg	Ala	Gln	Phe	Asp	Thr	Leu	Gln	Lys	Leu	Val	Lys	His	Tyr
	225				230					235					240
Thr	Glu	His	Ala	Asp	Gly	Leu	Cys	His	Lys	Leu	Thr	Thr	Val	Cys	Pro
			245						250					255	
Thr	Val	Lys	Pro	Gln	Thr	Gln	Gly	Leu	Ala	Lys	Asp	Ala	Trp	Glu	Ile
			260				265						270		
Pro	Arg	Glu	Ser	Leu	Arg	Leu	Glu	Val	Lys	Leu	Gly	Gln	Gly	Cys	Phe
		275					280					285			
Gly	Glu	Val	Trp	Met	Gly	Thr	Trp	Asn	Gly	Thr	Thr	Lys	Val	Ala	Ile
	290					295					300				
Lys	Thr	Leu	Lys	Pro	Gly	Thr	Met	Met	Pro	Glu	Ala	Phe	Leu	Gln	Glu
	305				310					315					320
Ala	Gln	Ile	Met	Lys	Lys	Leu	Arg	His	Asp	Lys	Leu	Val	Pro	Leu	Tyr
			325						330					335	
Ala	Val	Val	Ser	Glu	Glu	Pro	Ile	Tyr	Ile	Val	Thr	Glu	Phe	Met	Ser
			340					345					350		
Lys	Gly	Ser	Leu	Leu	Asp	Phe	Leu	Lys	Glu	Gly	Asp	Gly	Lys	Tyr	Leu
		355				360						365			
Lys	Leu	Pro	Gln	Leu	Val	Asp	Met	Ala	Ala	Gln	Ile	Ala	Asp	Gly	Met
	370					375					380				
Ala	Tyr	Ile	Glu	Arg	Met	Asn	Tyr	Ile	His	Arg	Asp	Leu	Arg	Ala	Ala
	385				390					395					400
Asn	Ile	Leu	Val	Gly	Glu	Asn	Leu	Val	Cys	Lys	Ile	Ala	Asp	Phe	Gly
			405						410					415	
Leu	Ala	Arg	Leu	Ile	Glu	Asp	Asn	Glu	Tyr	Thr	Ala	Arg	Gln	Gly	Ala
			420					425					430		

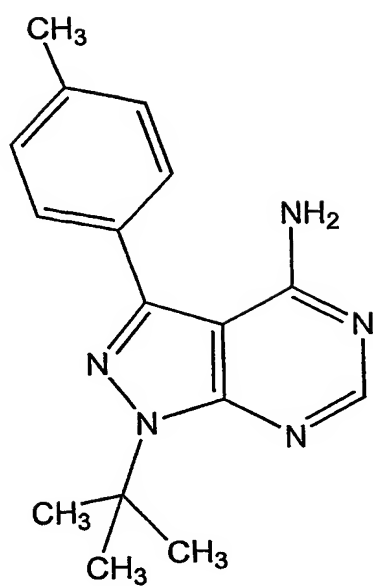
**FIG. 4 cont.**

Lys	Phe	Pro	Ile	Lys	Trp	Thr	Ala	Pro	Glu	Ala	Ala	Leu	Tyr	Gly	Arg
		435					440					445			
Phe	Thr	Ile	Lys	Ser	Asp	Val	Trp	Ser	Phe	Gly	Ile	Leu	Gln	Thr	Glu
	450					455					460				
Leu	Val	Thr	Lys	Gly	Arg	Val	Pro	Tyr	Pro	Gly	Met	Val	Asn	Arg	Glu
465					470					475					480
Val	Leu	Glu	Gln	Val	Glu	Arg	Gly	Tyr	Arg	Met	Pro	Cys	Pro	Gln	Gly
				485					490					495	
Cys	Pro	Glu	Ser	Leu	His	Glu	Leu	Met	Asn	Leu	Cys	Trp	Lys	Lys	Asp
			500					505					510		
Pro	Asp	Glu	Arg	Pro	Thr	Phe	Glu	Tyr	Ile	Gln	Ser	Phe	Leu	Glu	Asp
		515					520					525			
Tyr	Phe	Thr	Ala	Thr	Glu	Pro	Gln	Tyr	Gln	Pro	Gly	Glu	Asn	Leu	
	530					535					540				

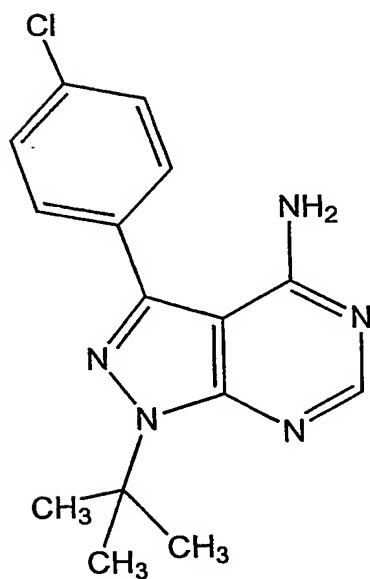
**FIG. 5**

**FIG. 6**





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**FIG. 8**

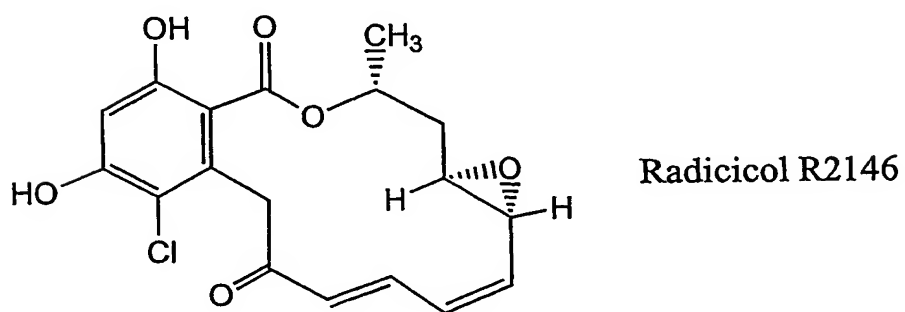
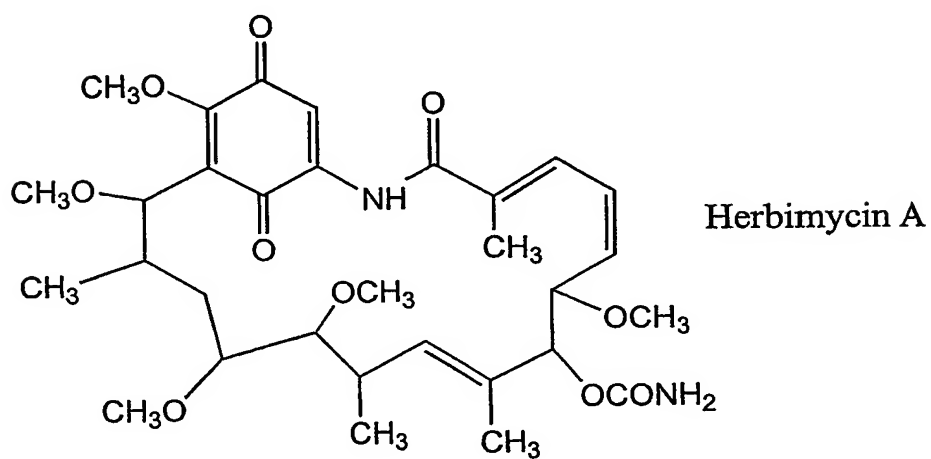
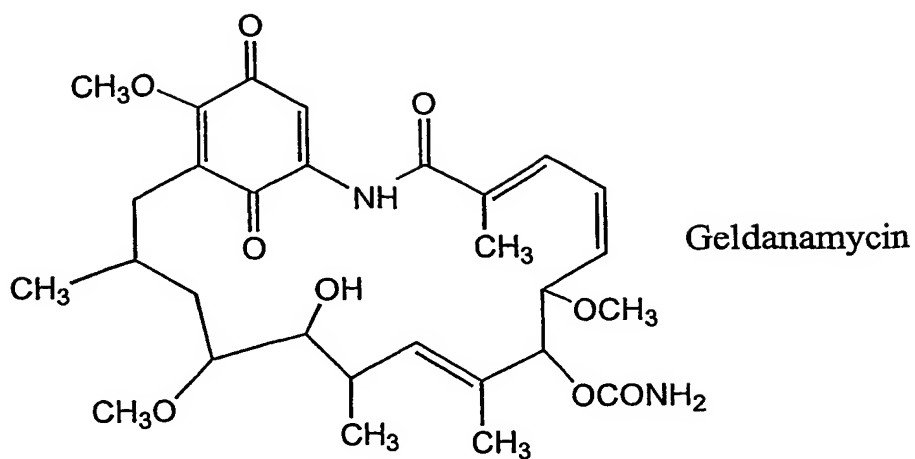
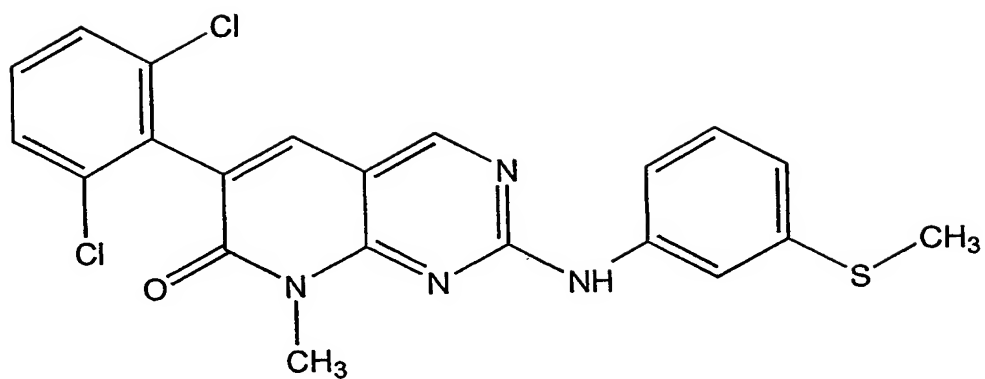


FIG. 9



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**FIG. 10**



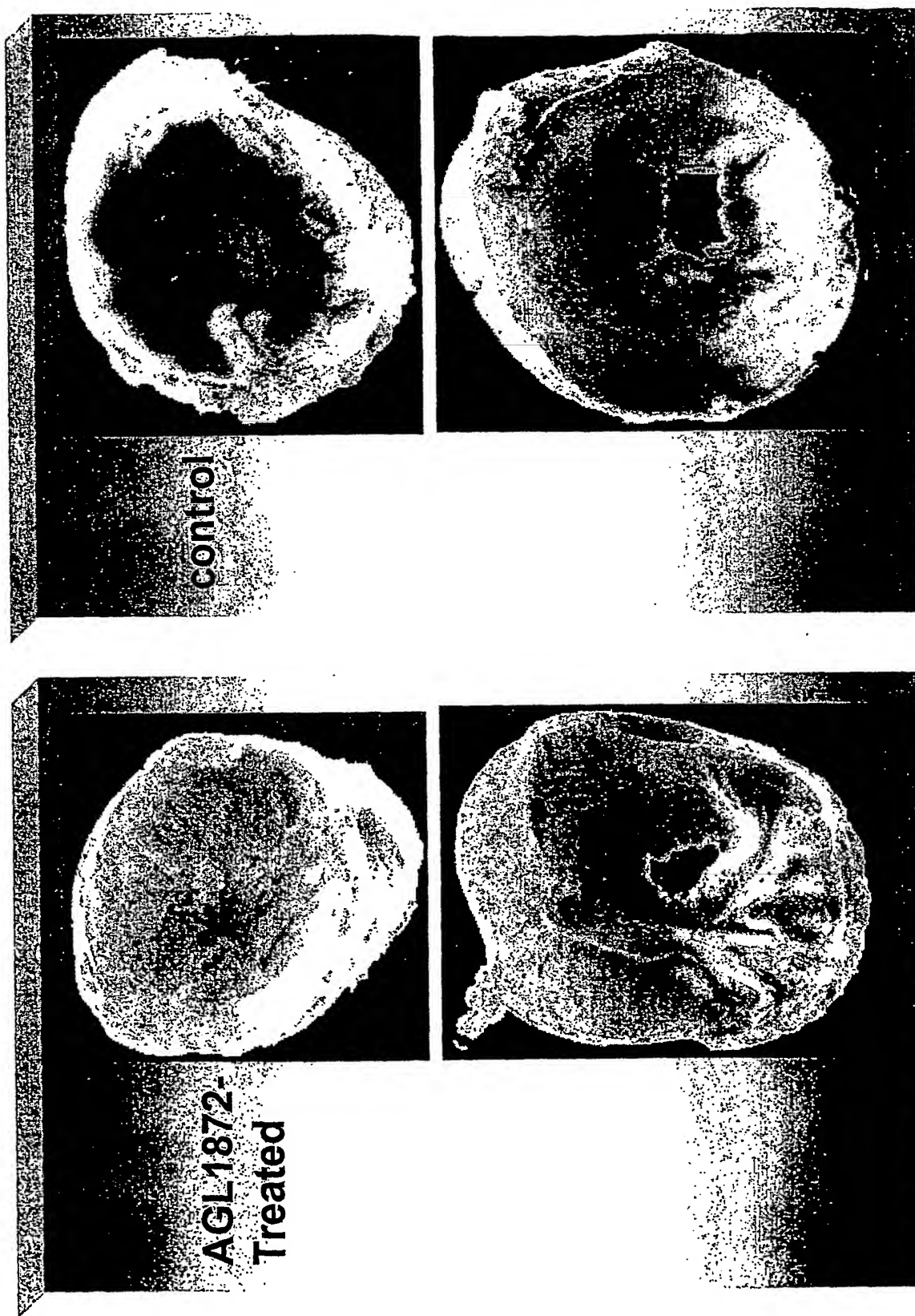


FIG. 11

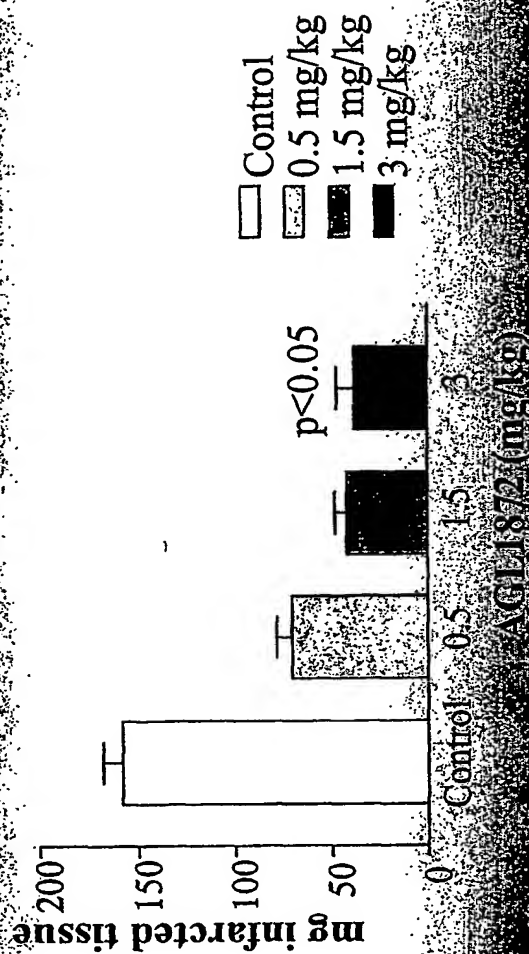


FIG. 12

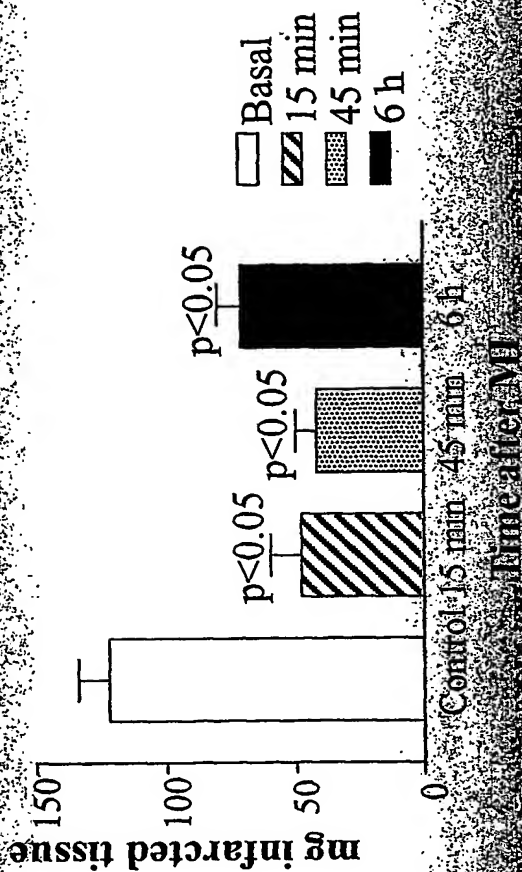


FIG. 13

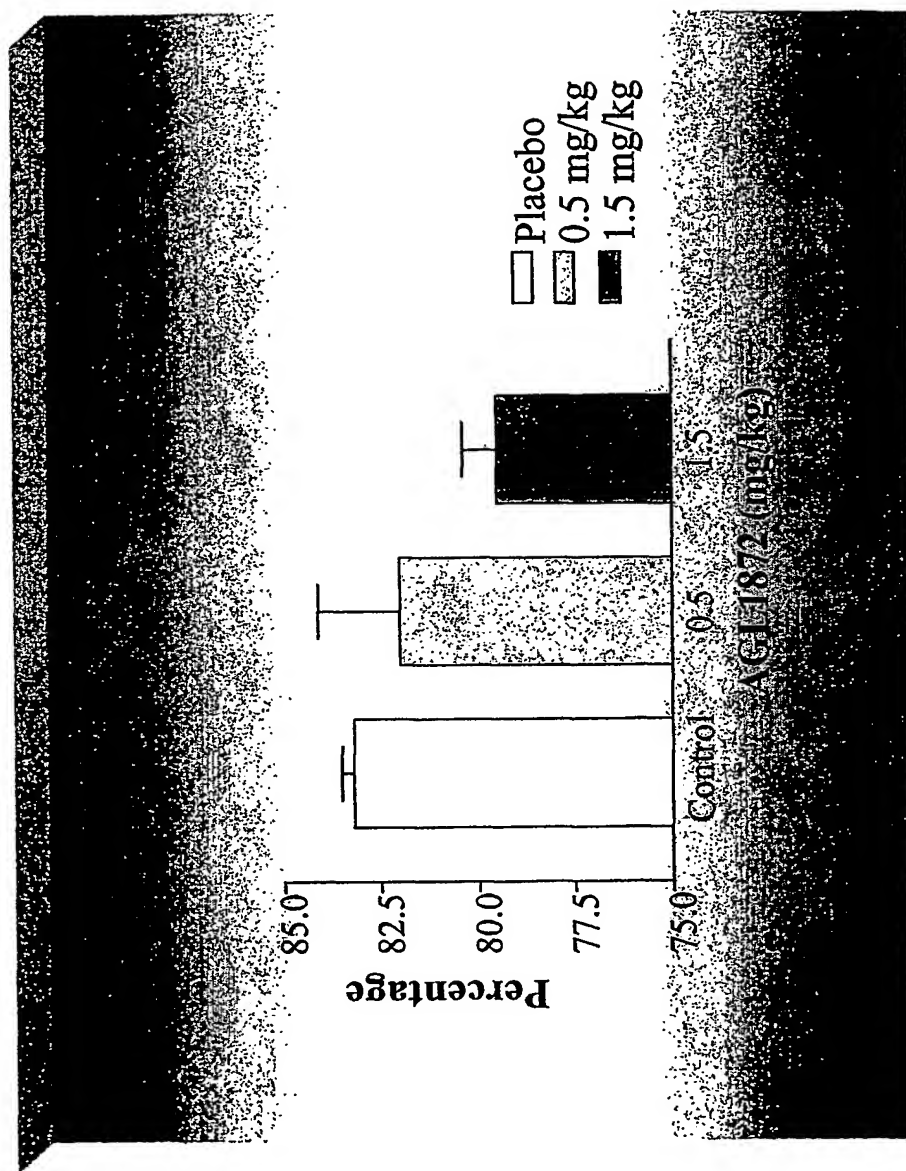


FIG. 14

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